WHAT IS CLAIMED IS:

1. An automotive radar comprising:

an antenna equipped with at least one radiating element which radiates linear polarized radio waves;

a slit plate which is a metal plate in which a plurality of slits are defined, placed in front of the surface of the antenna;

radio wave absorbers provided between the antenna and the slit plate; and

a transceiver device which supplies transmit signals to the antenna to radiate radio waves and, from signals acquired by receiving reflection waves which are returned waves of the radio waves striking an obstruction, detects a direction in which the obstruction exists.

2. The automotive radar according to claim 1, wherein the longitudinal direction of the slits defined in the slit plate is orthogonal to the direction of co-polarized waves being radiated from the radiating element.

3. The automotive radar according to claim 1, wherein a distance between the antenna and the slit plate falls within a range from one-eighth to one-half of an effective wavelength at a frequency used by the radar.

4. The automotive radar according to claim 1, wherein

the radio wave absorbers are placed between edges of the antenna and edges of the slit plate to block at least unwanted radiation in a top and bottom direction when the radar is mounted on a mobile object.

5. The automotive radar according to claim 1, wherein the radio wave absorbers are placed between edges of the antenna and edges of the slit plate to block at least unwanted radiation in a horizonal direction when the radar is mounted on a mobile object.

6. The automotive radar according to claim 1, further comprising a radome made of a dielectric material, wherein the antenna and the slit plate are covered by the radome.

7. The automotive radar according to claim 6, wherein at least one surface of the slit plate is brought in contact with the radome.

8. The automotive radar according to claim 6, wherein a distance between the radome and the antenna is larger than a distance between the slit plate and the antenna.

9. An automotive radar comprising:

an antenna which radiates linear polarized radio waves in a forward direction;

a slit plate which is a metal plate in which a plurality of slits are defined, placed in front of the antenna;

radio wave absorbers provided between the antenna and the slit plate to absorb radio waves being radiated in a direction orthogonal to a forward direction of the antenna; and

a transceiver device which supplies transmit signals to the antenna to radiate radio waves and, from signals acquired by receiving reflection waves which are returned waves of the radio waves reflected by an obstruction, detects a direction in which the obstruction exists.

10. The automotive radar according to claim 9, wherein the radio wave absorbers are placed between edges of the antenna and edges of the slit plate to block at least unwanted radiation in a top and bottom direction when the radar is mounted on a mobile object.